

Claims

1. A rewinding machine comprising: a path for feeding the web material towards a winding system; interruption members to interrupt the web material at the end of winding of a log; a core insertion channel, defined by a rolling surface and a movable member; a core feeder to insert winding cores in succession in said channel; an electrostatic device positioned along said channel to electrostatically charge the winding cores and/or the web material in order to produce, due to the electrostatic charges, reciprocal adhesion of the core and the initial free edge of the web material obtained by interruption of the material at the end of winding of each log.

2. Rewinding machine as claimed in claim 1, in which said movable member and said rolling surface are positioned so that when a core is inserted in said channel, the web material is between said core and said movable member and in contact with said movable member.

3. Rewinding machine as claimed in claim 1 or 2, in which said movable member is a core feed member.

4. Rewinding machine as claimed in claim 1, 2 or 3, in which said movable member consists of a winding roller forming part of the winding system and around which the web material is entrained, said winding system being a peripheral winding system.

5. Rewinding machine as claimed in one or more of the preceding claims, in which the interruption member is combined with the movable member and positioned with respect to the movable member on the opposite side of the channel, to act on the web material through the movable member.

6. Rewinding machine as claimed in one or more of the preceding claims, in which said electrostatic device comprises at least one charge bar connected to a voltage source.

7. Rewinding machine as claimed in claim 6, in which said bar is positioned to electrostatically charge said cores.

8. Rewinding machine as claimed in claim 6 or 7, comprising a bar positioned to electrostatically charge said web material.

9. Rewinding machine as claimed in one or more of the preceding claims, in which the movable member comprises a flexible member entrained around at least two rollers.

10. Rewinding machine as claimed in claim 9, in which one of said two rollers is a winding roller of a peripheral winding system.

11. Rewinding machine as claimed in claim 9 and 10, in which one or more charge bars of the electrostatic device are housed between said
5 rollers, within the closed path defined by the flexible member.

12. Rewinding machine as claimed in one or more of the preceding claims, comprising a gluing device for applying glue to the final free edge of the logs.

13. Rewinding machine as claimed in claim 12, in which said gluing
10 device comprises a glue dispenser to apply glue on said core, which transfers said glue to the web material.

14. A method for the production of logs of wound web material, comprising the following steps: feeding the web material to a winding system; winding a first log of web material around a first winding core; interrupting the
15 web material at the end of winding of said first log, forming a final free edge of said first log and a initial free edge for winding of a second log; adhering said initial free edge to a second core by application of electrostatic charges which produce reciprocal attraction between core and free edge; and wherein said electrostatic charges are applied after the core has come into contact with the
20 web material.

15. A method for the production of logs of wound web material, comprising the following phases: feeding the web material to a winding system; winding a first log of web material around a first winding core; interrupting the web material at the end of winding of said first log, forming a
25 final free edge of said first log and an initial free edge for winding of a second log; adhering the initial free edge to a second core by application of electrostatic charges which produce reciprocal attraction between core and free edge; wherein said cores are inserted in an insertion channel defined by a rolling surface and a movable member, the electrostatic charges being applied
30 at the level of said channel.

16. Method as claimed in claim 14 or 15, characterized in that the core is electrostatically charged.

17. Method as claimed in claim 14 or 15, characterized in that said web material is electrostatically charged.

18. Method as claimed in one or more of the claims 14 to 17, characterized in that the web material is interrupted after the core has been brought into contact with the web material.

5 19. Method as claimed in one or more of the claims 14 to 18, characterized in that said web material is interrupted immediately after application of the electrostatic charge.

20. Method as claimed in one or more of the claims 14 to 19, characterized in that the electrostatic charges are applied when the core passes along said channel.

10 21. Method as claimed in one or more of the claims 14 to 20, characterized in that said winding system is a peripheral winding system comprising a winding cradle.

15 22. Method as claimed in one or more of the claims 14 to 21, characterized in that said movable member consists of a winding roller forming part of said winding cradle.

23. Method as claimed in one or more of the claims 14 to 22, characterized in that glue is applied to the final free edge of said log.

24. Method as claimed in claim 23, characterized in that said glue is applied to said second core and transferred via said core to the web material.